

**REMARKS**

By this amendment, claims 18-28 are pending, in which claim 28 is currently amended and claim 29 is newly presented. No new matter is introduced.

The Office Action mailed May 31, 2006 objected to claim 28 under 35 U.S.C. § 112, second paragraph, as indefinite, and rejected claims 18-27 as obvious under 35 U.S.C. § 103(a) based on *Huang* (US 6,194,998 B1).

First, Applicant appreciates the indication that claim 28 would be allowable if amended to overcome the indefiniteness objection and rewritten in independent form.

In response to the indefiniteness objection, claim 28 has been amended to recite “the valve stem assembly is **replaceable**.” Thus, it is believed the objection has been overcome, and no further rejection on that basis is anticipated. If, however, the Examiner disagrees, the Examiner is invited to telephone the undersigned who will be happy to work with the Examiner in a joint effort to derive mutually satisfactory claim language.

Regarding the obviousness rejection, Applicant respectfully traverses on the merits for the reasons provided below.

Independent claim 18 recites, “disconnecting a **wire lead** coupled to a valve pin disposed within the valve stem from a terminal of a battery.” Independent claim 21 recites, “disconnecting a valve pin disposed within the valve stem assembly from a **wire lead** coupled to a terminal of a battery.” Independent claim 24 recites, “a valve pin coupled to a first terminal of a battery **via a first wire lead**; and a **threaded connector** coupled to a second terminal of a battery **via a second wire lead**.”

The present Office Action continues to apply the reference of *Huang* with respect to the above features. Particularly, the Examiner persists in erroneously interpreting *Huang*’s resilient battery contacts 65 and 90 as not “wire” lead but “functionally equivalent as wire leads,” (*see*

Office Action, pages 2-4). Further, the Examiner impermissibly rests the obviousness determination on the mere functional equivalency of the components at issue. *Id.* As such, the Office Action has ignored the basic tenets of both obviousness and equivalency.

The Examiner makes the conclusory statement that battery contacts 65 and 90 “are functionally equivalent as wire leads,” but provides no factual basis to support this contention, (*see* Office Action, page 7). The Examiner does not explain how and why one of ordinary skill in the art would have been motivated to replace battery contacts 65 and 90 for wire leads. Nor does she make an assessment of a reasonable expectation of success using such components within the *Huang* framework. In fact, on page 7 of the Office Action, the Examiner attempts to pass this burden onto Applicant stating that “‘a reasonable expectation of operability, i.e., success’ of a device or system cannot be determined based merely on the Applicant’s opinion.” This initial burden does not rest on Applicant. Nevertheless, as a convenience to the Examiner, Applicant provided several factually-based technical reasons (not opinions) to support a determination of inoperability and nonequivalence of the *Huang* system attempting to substitute wire leads for battery contacts 65 and 90, (*see* Applicant’s Response of March 13, 2006, pages 8-9).

Moreover, just because two components reach the same result (electrically), does not make one component, *per se*, obvious over the other. Expedients which are functionally equivalent to each other are not necessarily obvious in view of one another, especially when their mechanical functions are divergent, (*see generally* Applicant’s Response, March 13, 2006, pages 8-9) (highlighting mechanical differences). Applicant reminds the Examiner that equivalency is not a test for obviousness. *In re Scott*, 323 F.2d 1016, 1019, 139 USPQ 297, 299 (C.C.P.A. 1963); *In re Flint*, 330 F.2d 363, 367, 141 USPQ 299, 302 (C.C.P.A. 1964). For an examiner to rely on equivalence as a rationale **supporting** an obviousness rejection, the equivalency must be

recognized in the prior art, and cannot be based on applicant's disclosure or the mere fact that the components at issue are functional or mechanical equivalents. *See In re Ruff*, 256 F.2d 590, 118 USPQ 340 (C.C.P.A. 1958); M.P.E.P. § 2144.06.

The Examiner asserts in response to Applicant's arguments that "the equivalency is suggested by the reference as stated in the rejection," however, as discussed above, the Office Action is devoid of a single citation to *Huang's* written description justifying such a supposition, (*see* Office Action, page 7). In fact, Applicant's study of the reference reveals not a single discussion, or even a suggestion, that battery contacts and wire leads are equivalent. As previously highlighted by Applicant (Response dated March 13, 2006, page 7), the *Huang* system makes use of conductive wire elsewhere in the system, thereby suggesting that *Huang* does not contemplate battery contacts 65 and 90 to be substitutable with conductive wire. Similarly, the previous Office Action is also without any prior art reference even remotely teaching or suggesting the equivalency of wire leads and battery contacts, (*see generally* Office Action, December 13, 2005).

Even still, and assuming, *arguendo*, that battery contacts 65 and 90 were equivalent, the Examiner cannot rest an obvious determination on mere functional or mechanical equivalency. The Office must provide a suggestion or motivation, based solely within the prior art, that would led one of ordinary skill in the art to modify *Huang* to arrive at the claimed invention. Yet, no suggestion or motivation was provided. Further, based on Applicant's previous arguments concerning the inoperability of the proposed modification to the *Huang* system, it is doubtful that the Examiner could now provide a reasonable justification to support such modifications.

Applicant respectfully reminds the Examiner that when rejecting a claim under 35 U.S.C. § 103(a), it is incumbent upon **the examiner** (not the Applicant) to provide a **factual basis** to support the legal conclusion of obviousness by carrying the initial burden of presenting a *prima*

*facie* case of obviousness. *In re Fine*, 837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988); *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). Based on the objective evidence of record, the examiner is required to make the factual determinations set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 17, 148 USPQ 459, 467 (1996), and establish each of three requirements clearly delineated within M.P.E.P. § 2143. The first requirement directs the examiner to demonstrate that *Huang* teaches or suggests **each and every element** recited in the claims. See *In re Royka*, 490 F.2d 981, 180 USPQ 580 (C.C.P.A. 1974); M.P.E.P. § 2143.03. Second, the examiner must explain **how and why** one having ordinary skill in the art would have been led to modify an applied reference to arrive at the claimed invention. See *Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir. 1988), *cert. denied*, 488 U.S. 825 (1988); M.P.E.P. § 2143.01. Third, in establishing the requisite motivation, the examiner must establish that both the **suggestion** and a **reasonable expectation of success** exist and **stem from the prior art itself, as a whole**, and **not** from Applicant's disclosure. See generally *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991); M.P.E.P. § 2143.02.

With respect to independent claim 24, Applicant also submits that *Huang* fails to teach the additional recited features of “[a] valve stem apparatus comprising . . . a **threaded connector** coupled to a second terminal of a battery **via a second wire lead**.” Dissimilarly, the *Huang* system's first battery contact 90 makes electrical connection to battery housing 6 either through contactor plate 9 or conductive extension 91, (col. 5, lines 1-23). Battery housing 6 is then in electrical communication with the threaded connector portion (outer end portion 71) of valve housing 7 through connecting portion 60, (col. 5, lines 41-46). This configuration is distinctly different than as positively claimed, i.e., “via a second wire lead.”

From the above, it is clear that a *prima facie* case for obviousness has not been established. Applicant, therefore, respectfully solicits the withdrawal of the obviousness rejection to independent claims 18, 21, and 24, and claims 19, 20, 22, 23, and 25-27, depending correspondingly therefrom, and urges the indication that claims 18-28 are in condition for allowance.

Furthermore, dependent claims 19, 20, 22, 23, and 25-27 are allowable on their own merits. For instance, dependent claim 26 recites, “a first **removable connector** coupled to the first wire lead and to either the valve pin or the first terminal,” and dependent claim 27 recites, “a second **removable connector** coupled to the second wire lead and either to the threaded connector or the second terminal.” The Examiner, on page 5, acknowledges that “[n]o connectors are shown in *Huang* to connect the wire leads/battery contacts to either the valve pin or the battery terminals.” The Examiner merely concludes that “one skilled in the art would have readily recognized that there are **connections made** by the battery contacts and the battery terminals.” Yet, claims 26 and 27 recite features of “removable connectors” not merely “connections”; it is not understood why the Examiner chooses to contort the claim language. In this manner, the Examiner distorts the claims’ purview by distilling the subject matter down to a “gist” or “thrust,” thus failing to meet its burden of analyzing the subject matter **as a whole**. *See, e.g., W.L. Gore Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983) (holding that restricting the consideration of the claims and disregarding other limitations resulted in treated claims as through they read differently than allowed).

Further, the Examiner does not provide any other supporting factual evidence within the prior art to suggest or motivate one of ordinary skill in the art to include removable connectors within the *Huang* system. *Huang* only intends battery contacts 65 and 90 to “abut” the respective battery terminals and valve stem body 80a, (*see* col. 5, line 42 – col. 6, line 40; FIGs. 4 and 6).


As for newly added claim 29, this claim recites, “wherein the valve stem is replaced without removing the battery.” Applicant submits that these features are absent from *Huang* and furthermore, *Huang* teaches away from such features as replacement of air valve member 8 requires battery housing 6 to be removed, therefore necessitating removal of the battery cell 5, (see col. 6, lines 41-48; FIG. 2). Moreover, claim 29, which depends from independent claim 24, is allowable for at least those reasons proffered for claim 24.

Therefore, the present application, as amended, overcomes the objections and rejections of record and is in condition for allowance. Favorable consideration is respectfully requested. If any unresolved issues remain, it is respectfully requested that the Examiner telephone the undersigned attorney at (703) 425-8508 so that such issues may be resolved as expeditiously as possible.

Respectfully Submitted,

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